

We claim:

1 1. A fail safe mechanism for a subscriber link over a conductor connecting a
2 subscriber server with at least one telephone device to a telephone network facility,
3 comprising:

4 a fail safe connection in said subscriber server for said at least one telephone device,
5 said fail safe connection being switchable between a normal position connecting said at
6 least one telephone device to said subscriber server and a backup position connecting
7 directly to said conductor;

8 said telephone network facility having a telephone network termination configured
9 to connect an analog telephone;

10 a network interface terminating a link layer of said subscriber link at said telephone
11 network facility;

12 a switch on said network interface such that said conductor is switchable between
13 said network interface and said termination, whereby said at least one telephone device
14 is connectable to said telephone network termination when said fail safe connection is in
15 said backup position; and

16 an analog interface in one of said subscriber server and said at least one telephone
17 device connected to permit said at least one telephone to function as an analog telephone.

1 2. A mechanism as in claim 1, wherein said telephone network termination provides
2 battery-backup power for said analog telephone.

1 3. A safety device for multiple access subscriber link over a wire pair connecting a
2 subscriber server to at least first and second network interfaces, said first network
3 interface having a port directly connectable by a conductor to a phone such that said
4 phone is operable without power being supplied from said phone, said device
5 comprising:

6 a remote modem at said second network interface connected to said subscriber link;

7 a local modem of said server in communication with said remote modem over said
8 subscriber link;

9 a telephone using a first portion of a frequency spectrum of said subscriber link;
10 said local modem and said remote modem using a second portion of said frequency
11 spectrum;

12 said telephone being connected directly to said remote modem through said wire pair
13 at said remote end, said remote end of said wire being one of connected to said port one
14 of directly and selectably through a switch.

1 4. A device as in claim 3, wherein said remote end of said wire is connected to said
2 port selectably through a switch controlled by a controller.

1 5. A device as in claim 4, wherein said controller closes said switch responsively to
2 an occurrence of a failure of one of said remote and said local modems.

1 6. A device as in claim 4, wherein said controller closes said switch responsively to
2 a failure to receive at said local modem a message from said remote modem or a failure
3 to receive at said remote modem a message from said local modem.

1 7. A device as in claim 4, wherein said remote end of said wire is connected to said
2 port selectably through a switch that defaults to connect said remote end to said port
3 when power to said switch is lost.

1 8. A safety system for a multiple access subscriber link over a conductor between a
2 local server and a remote network interface, said remote network interface capable of
3 providing access for said subscriber link to multiple networks including at least one
4 broadband network providing non-dedicated time-variable allocation of band-width and
5 at least one narrowband network providing dedicated band-width through a switch, said

6 narrowband network being accessible through a port directly connectable by a conductor
7 to a plain old telephone (POT) such that said phone is operable without power being
8 supplied from said POT, said system, comprising:

9 a switch for connecting conductor remote end to said port;
10 a POT connectable by said server to said conductor at a conductor local end;
11 remote and local modems linked at said conductor remote and local ends,
12 respectively, said modems configured to modulate data signals to be applied to said to
13 least one broadband network at a range of frequencies above a range of frequencies used
14 by said POT.

1 9. A safety system for a multiple access subscriber link over a conductor between a
2 local server and a remote network interface, said remote network interface capable of
3 providing access for said subscriber link to multiple networks including at least one
4 broadband network providing non-dedicated time-variable allocation of band-width and
5 at least one narrowband network providing dedicated band-width through a switch, said
6 narrowband network being accessible through a port directly connectable by a conductor
7 to a plain old telephone (POT) such that said phone is operable without power being
8 supplied from said POT, said system, comprising:

9 a switch for connecting conductor remote end to said port;
10 telephone connectable by said server to said conductor at a conductor local end;
11 said server having an interface interposed between said telephone and said conductor
12 local end configured to make said telephone function as a POT by providing analog
13 signaling over said conductor in a first range of frequencies;
14 remote and local modems linked at said conductor remote and local ends,
15 respectively, said modems configured to modulate data signals to be applied to said to
16 least one broadband network at a range of frequencies above said first range of
17 frequencies.